DOCUMENT RESUME

ED 056 436 EC 040 476

TITLE	Experimental Classes for Multiply Handicapped Deaf Children (Summer, 1971).
INSTITUTION	Indiana School for the Deaf, Indianapolis.; Indiana State Dept. of Public Instruction, Indianapolis. Div. of Special Education.
SPONS AGENCY	Bureau of Elementary and Secondary Education (DHEW/OE), Washington, D.C.
PUB DATE	71
NOTE	74p.
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	Academic Achievement; Aurally Handicapped; Behavior Change; Communication Skills; *Deaf; *Educable Mentally Handicapped; Educational Objectives; *Educational Programs; Elementary School Students; *Exceptional Child Education; Mentally Handicapped; *Multiply Handicapped; Program Descriptions; Social Development; Summer Schools

ABSTRACT

Described is a 6 weeks summer school program for 23 multiply handicapped deaf and educable mentally retarded children, aged 6 1/2 to 13 years old. Specific educational objectives are: behavior change in social settings such as dormitory, school, and playground relations; behavior change in study habits; academic achievement in mathematics; motor development; language development; reading improvement; and communication skills development. The operational program is described to consist of academic, recreational, and dormitory programs. Types of materials employed by teachers certified in either deaf education or mentally handicapped education are said to be commerical or teacher prepared materials. Special experimental materials are the Project LIFE serices and Liz Foster's Workbook. A clinical psychologist is explained to have served as a professional consultant and evaluator. Parent participation in the educational program is noted briefly. Appended are explanation of specific educational techniques and teacher made materials, an inventory of materials used in the program, and the consulting psychologist's report. (CB)

ED056436

EXPERIMENTAL CLASSES FOR MULTIPLY HANDICAPPED DEAF CHILDREN

SUMMER 1971

EC 040476

Printed and Bound by
Instructional Media Center
Indiana School for the Deaf
Indianapolis, Indiana 46205

Under Title 1, ESEA

1971

EXPERIMENTAL CLASSES FOR MULTIPLY HANDICAPPED DEAF CHILDREN

Summer 1971

Indiana School for the Deaf — Indianapolis, Indiana

Alfred J. Lamb
Superintendent

Gregg D. Hartley
Business Administrator

Windell W. Fewell
Curriculum Projects Director

Jess M. Smith
Coordinator Title I Summer Program

Sharon Hurry
Chairman

Conducted under provisions of the Elementary and Secondary Education Act of 1965, Title I. Public Law 89-313, Project 71-53. Administered by the Indiana State Department of Public Instruction.

John J. Loughlin, Superintendent
Department of Public Instruction

James R. Alley, Director
Division of Special Education

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ACKNOWLEDGMENTS

The summer school staff wishes to express its appreciation to those who worked tirelessly in the selection and placement; in the evaluation and testing; and in the supervision of these children. These people were essential to the success of the Experimental Classes for Multiply Handicapped Deaf Children.

Special acknowledgments are made to the following:

The officials of the Federal and State governments, for making the project possible;

Mr. Alfred J. Lamb, Mr. Richard Helton, Mr. Jess M. Smith, and Mrs. Marny Olson of the Indiana School for the Deaf, for their cooperation and support;

Mr. and Mrs. Lester Stanfill, for their endless efforts in the Instructional Media Center to get needed materials and in keeping equipment in repair;

Patty Morris, secretary, for all her work and assistance during this summer program.

Summer School Staff

Supervising Teacher

Sharon E. Hurry, Director

Staff Teachers

Chris Krueger

Joyce Levy

Sandra Hakes

Donald Poteat

Sam Cullison

Dormitory Personnel

Girls Dormitory

Dean of Girls
Miss Ethel Koob

Ann Johnson

Margaret Hoffman

Joy Atwater

Linda Richmond

Boys Dormitory

Dean of Boys
Robert Kellogg

Alice Stiffner

Margaret Kratzberg

Counselors

Recreational Teachers

Supervising Teacher
Merle Goldman

Teachers

Robert Scott

Robert Seet

Staff Psychologist

Don Bryan

Staff Audiologist

Charles Sessler

Consulting Psychologist

Dr. Robert A. Wagoner
Crossroads Rehabilitation Center

FOREWORD

In the past, education of deaf children in Indiana has been generally the responsibility of the state and administered through one or more state agencies. Similarly, the education of retarded children, or children with some other debilitating handicap has also fallen to the state for organization and implementation.

Examination of applicants to the Indiana School for the Deaf reveals an increasing number of children who are both deaf and handicapped in some other way. For example, many of these children are diagnosed as mentally retarded deaf children. The admission policy of the school and its lack of facilities for the mulitply handicapped child rule out enrollment of mentally retarded children. Other state agencies are rarely able to provide suitable educational programs. Therefore, the problem arises as to where these multiply handicapped children can receive an adequate education.

The histories of many of the children enrolled in the 1971 summer experimental program show little formal education. In some cases, the formal education they did receive was not designed to meet their educational needs. Thus these children failed to progress and consequently were excluded. In yet other cases, the children had attended no school and had received no formal education.

The need for adequate educational programs for multiply handicapped deaf children in the State of Indiana is obvious. The fact that many such children have been unable to receive an education in suitable programs in their local communities is compounded by the lack of curriculum, trained personnel, and specific materials that may be employed to raise the children's educational levels. Therefore, these experimental summer classes were offered for a third summer as an attempt in discovering additional answers that will assist in establishing quality programs throughout the State of Indiana for these children.

This summer program considered the problems of twenty-three multiply handicapped deaf children from Indiana. The instructors, all staff members at the Indiana School for the Deaf, used their experience and knowledge in a search for solutions to the multiplicity of problems encountered when working with these children. The educational staff members believe that the many experiences encountered during this summer program and the recommendations enclosed herein may be used to implement good educational programs for such children. Indeed, they must be implemented if the state and other governmental units are to meet their responsibilities in providing meaningful education for multiply handicapped deaf children.

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NATURE OF THE PROJECT

This project was purely experimental in nature. The major purpose was to develop a wide range of knowledge that could be used to establish future programs for multiply handicapped deaf children in local communities or within the existing framework of the Indiana School for the Deaf. This project has been in effect for two summers prior to this summer. In this time, numerous materials, techniques, and ideas have been tested and evaluated. However, it was felt that additional information was needed to continue the development of an adequate curriculum for these children. Therefore, these summer experimental classes were established to gain additional pertinent information concerning multiply handicapped deaf children and to attempt to raise their present educational level. A further purpose was to discover how the present program at the Indiana School for the Deaf might be changed better to serve those children who might fall into the borderline classification and who are presently enrolled in the program. Methods to be used in program improvement were also a matter of concern due to the probability that a significant number or children who might fit into this classification are currently enrolled.

Being experimental, the classes were organized so that they afforded the greatest possible latitude for the teachers to test and evaluate established methods of instruction or to introduce new methods. Conventional-type methods were used

along with new and innovative media. The method of utilizing both existing and novel material provided some guidelines for experimentation. In essence, this kept the experimentation within limits of reason, yet without stringent guidelines which are self-imposed in the regular classroom. Utility of media produced by the auxiliary materials workshop in previous summers and of the materials devised by the education staff could be evaluated and altered as needed.

The time limit of six weeks was somewhat restrictive. In order to establish more valid conclusions, the classes would have to be carried on for a considerably longer period of time. A long-range analysis of results will afford a more meaningful evaluation of all that was tried in the course of this project. In an attempt to provide the needed valid conclusions, the Indiana School for the Deaf has conducted a full school term program under Title III for five multiply handicapped deaf children. This program was conducted during the 1970-71 school year and was designed to meet the needs of five students selected from the previous summer classes. This program was evaluated at the end of the school year. For the school year 1971-72 five more multiply handicapped deaf children will be added to the existing five making a total of ten children. These additional children will make possible even more information as to the academic, social, and psychological needs of these children.

The Experimental Program started June 28, 1971, and continued through August 6, 1971.

CRITERIA FOR THE PROGRAM

The criteria used to establish the experimental summer classes were extremely important to developing the total program. The criteria were most essential in the selection of the children, the type of curriculum established, the methods of education, etc.

The two major criteria for this program were that each child should be either severely hard of hearing or deaf and that his measurable intelligence quotient should be between 60 and 79. Thus, the children must be educably retarded deaf children. The students could possess other secondary handicaps in addition to hearing loss and mental retardation, but these must not impose greater limitations on the classroom procedures. The children must be between the ages of 6 1/2 and 13. Also, a residential program would be available to all students.

These criteria were closely adhered to in establishing this program. Each student fell within the prescribed categories and was taught by a qualified teacher of the deaf.

SELECTION OF CHILDREN

Names of children selected for possible enrollment in the summer experimental classes were taken from lists of those students who had been excluded at an earlier date from the Indiana School for the Deaf. Most of the students had already had a limited amount of schooling in public schools or by public educational agencies within their local communities. A few

children had only the education obtained through the experimental classes conducted by the Indiana School for the Deaf during the summers of 1969 and 1970. Some of the students had never attended day educational facilities and thus had no formal education. In all instances, children who had prior school experience were in classes designed for children who were either only deaf or only mentally retarded. No child was in a program designed to meet his specific needs.

The school psychologist compiled for the workshop staff a list of twenty-five names along with clinical information contained in the school files. An alternate list was also prepared. The staff then composed a letter to the parents of these children stating the intent and purpose of the experimental classes. It was reiterated that the results of the experimental classes were in no way binding on the school and that comments made by individuals concerning the classes were individual opinions and of no significance insofar as future educational placement at the sponsoring school was concerned. Included in the letter were standard application forms used by the school. Each form was stamped to indicate it was only for the experimental classes.

Twenty-three children were accepted in the summer program. Of these twenty-three, twelve were boys and eleven were girls. These twenty-three children exhibited varying backgrounds and handicaps.

STAFFING

The teachers selected to work in this project were regular staff members of the Indiana School for the Deaf. There were five teachers in the project, all of whom were certified teachers of the deaf. For the most part, extensive experience in dealing with deaf children with special learning disabilities was available. All teachers were dedicated to the purposes of the project and worked well together in sharing knowledge from their past experiences.

A regular interchange of ideas and suggestions during individual and group conferences led to improvement and revision of methods. Teachers had complete freedom in the choice of methods and materials to be used. Since this program was experimental by nature, this freedom assisted in providing guidelines for future educational programs.

All five of the teachers were hearing. Four had some graduate training, and one had a master's degree in special education. The staff recognized the value of graduate training and saw the need for more emphasis on the training of teachers in the field of the multiply handicapped.

In addition to the educational staff cited, other personnel were employed to work with the children in their out-of-school hours. Two teachers conducted daily recreational activities for the children. These teachers were regular staff members of the Indiana School for the Deaf and had experience in teaching children with educational problems.

Dormitory personnel were also needed. Six dormitory counselors were employed to supervise the children in their leisure time and weekend activities. Two female counselors supervised the children in the boys' dormitory and four female counselors supervised in the girls' dormitory. All were regular staff members at the Indiana School for the Deaf with extensive experience in dormitory supervision. These people provided a needed and integral part of the total program for the twenty-three children enrolled in the summer program.

GROUPING

Upon receipt of all available clinical information concerning the children making application for the summer program, there was a need to establish some criteria for class grouping. As the children were selected from the group previously excluded, there was a common denominator of below-average mental ability. The degree of hearing impairment was not considered a factor in the grouping of these children because of the similarities of the secondary handicaps.

With consideration to the aforementioned characteristics, the grouping was based largely on chronological age. The staff was aware that this factor would be a poor choice if it were the sole criterion. Nevertheless, when all factors were considered, the children were divided into five groups. This resulted in five classes with four to five children in each class.

During the first week of the summer classes, the students were carefully observed by the supervising teacher and the classroom teacher. After a few days it became apparent that changes in classroom assignments were needed. The major reasons for change were: inappropriate socialization, aggressive behavior, and adjustment problems due to secondary handicaps. Among the secondary handicaps were mild cerebral palsy, visual-motor problems, visual perception difficulties, and inadequacies in communication skills. Another factor that constituted changes was the last minute deletions and additions to the original children enrolled as well as the late arrivals of some of the children. These new groupings provided better interchange among the students in group activities and more individual attention to each child. Through rotating assignments during out-of-class activities such as free play and lunch, the children had contact with all of the teachers. This arrangement proved most helpful in the performance assessments of the individual children.

GENERAL OBJECTIVES

The multiply handicapped deaf child is often the lost or forgotten child. Due to the lact of adequate educational facilities, trained educational personnel, adequate materials, and an overall lack of understanding about these children and their problems, they are unable to obtain educational assistance in their own communities. It is hoped that through this experi-

mental program we will be able to obtain some adequate educational techniques, materials, and personnel qualification suggestions that can assist the existing education facilities in the child's home community. These discoveries will give him the opportunity to broaden his educational horizons.

The following are some goals for this program:

1. To identify those children in the state who could most benefit by additional education during the summer months.

2. To establish small experimental classes for multiply handicapped children who were not previously enrolled in the Indiana School for the Deaf or to whom admission had been denied because of additional handicaps.

3. To provide academic training in the following areas:

   a. Gross and fine motor coordination
   b. Visual discrimination
   c. Vocabulary building
   d. Number concepts--progressing from simple number identification to simple adding
   e. Reading, using new and existing vocabulary in simple sentences
   f. Introduction and/or improvement of cursive writing
   g. Communication in a combined method if possible. If impossible, fingerspelling, signing, or oral as needed by the child
   h. Introduction and perfection of social skills such as sharing, courtesy to others, manners at mealtime and during school hours. Special emphasis on group work and group play
   i. Participation in the Project LIFE

4. To establish a sense of responsibility both within the school situation and the dormitory situation.

5. To experiment with new teaching techniques and materials. Such materials would include those manufactured and those developed by our Materials Workshop for the multiply handicapped child.

6. To evaluate and select five additional children to be added to the year-round program for multiply handicapped children on the Indiana School for the Deaf campus.

7. To introduce these children to residential living and evaluate the adjustment problems encountered. Through these problems, perhaps concrete ideas and suggestions will develop to make the adjustments less catastrophic for the children.

8. To observe and evaluate the progress of the children in our summer program. This will be done through the conbined efforts of the supervisor, the classroom teachers, the home care personnel, and the consulting psychologist. This will be done weekly, so that curriculum and schedules can be changed to reflect the needs of the students.

SPECIFIC OBJECTIVES

During the first weeks of school the educational staff set up the specific objectives for each child for the remaining weeks of the summer program. It was the staff's desire to plan the summer program to meet the needs of each individual child.

A compilation of all the specific objectives shows the following needs of the children enrolled in the summer program. It can be seen that this group of children displayed a wide variety of needs; however, the objectives shown here should be comparable to any group of educably retarded deaf children that might be selected.

I. Behavior Modification
    A. Social
        1. Dormitory relations
            a. sharing
            b. group play
            c. cleanliness
            d. manners
        2. School relations
            a. sharing
            b. group play
            c. cleanliness
            d. manners
        3. Playground relations
            a. sharing
            b. group play
            c. cleanliness
            d. manners

B. Academic
   1. Remain seated
   2. Cooperate with teacher
   3. Accurate work
   4. Speed of work completion
   5. Participate in group activities

II. Math Progress
   A. Simple addition skills
      1. Horizontal problems
         a. one and two digit numbers
      2. Vertical problems
         a. one and two digit numbers

   B. Simple subtraction skills
      1. Horizontal problems
         a. one and two digit numbers
      2. Vertical problems
         a. one and two digit numbers
      3. Carrying
      4. Borrowing

   C. Value of money
      1. Identification of coins
      2. Identification of paper
      3. Practice in use of coins and paper
      4. Addition using coins
      5. Subtraction using coins

   D. Concept of time
      1. Hours
      2. Half hours

   E. Rote counting
      1. Numerals to 100

   F. Degrees (size and quantities)
      1. Big and little
      2. More and less

III. Motor Training
   A. Gross motor coordination

   B. Fine motor coordiantion

IV. Language
   A. Simple sentences (written)

   B. Construction of news

   C. Construction of letters home

D. Calendar work
   1. Days of the week
   2. Sentence work

E. Question forms
   1. What
   2. Where
   3. When

F. Vocabulary building

V. Reading
   A. Commands
      1. Words
      2. Sentences

   B. Action words
      1. From picture mating
      2. From word only

   C. News

   D. Letters from home

   E. Simple sentences

   F. Vocabulary building

   G. Phrases

   H. Comprehension skills

VI. Communication Skills
   A. Oral

   B. Fingerspelling

   C. Signing

OPERATIONAL PROGRAM

The Academic Program:

The activities in which the children participated were quite varied during the day. Regularly each morning the children were escorted from the boys' and girls' dormitories to the

school by the dormitory counselors on duty at the time. In this way the counselors were able to teach the children to stay in groups and to cross streets properly. This walk also afforded the children an opportunity to assist the children of the group who had mobility problems. Hence a graphic lesson in consideration of fellow men was taught.

Upon arrival (8:15 a.m.) at the academic wing of the Intermediate Primary Unit, the children proceeded to their classrooms. The first period, lasting an hour and a half, was devoted to formal instruction at the discretion of the teacher. It was found that during this first period many activities could be accomplished because the children were fresh and eager to learn. Thus, the most difficult tasks were presented at this time.

At 10:00 a.m. the children enjoyed a free play and/or structured activity period under the supervision of two classroom teachers. These periods presented excellent opportunities for observation of the behavior of the children in group situations. The child's inability to function within a group situation was immediately visible to the teachers during this time. The teachers who were not on supervisory duty were afforded a preparation period during this time.

At 10:45 a.m. the children were given a restroom break and then returned to their classrooms for the second period of instruction. During this period unfinished activities from the first period were completed and new and/or reinforcement materials were introduced. By this time most of the children had

been able to work out any frustrations that might have existed earlier in the day. The children worked well during this period; however, their efficiency was less because they were beginning to tire and because they were getting hungry. Toward the end of this period the children were given the opportunity to prepare for lunch which was served at 12:00 noon.

After lunch two of the teachers took the children outside for a free play period. This provided an opportunity for relaxation before they began the last instructional period of the day. The teachers not on duty utilized this time for preparation, for familiarizing themselves with their children's clinical information, for conferences with the supervising teacher or the psychologist, or for preparation of afternoon arts and crafts projects.

The final portion of the academic day began at 1:30 p.m. and continued until 2:45 p.m. During this period some of the children were provided with a 20-30 minute nap time. Several of them actually fell asleep during this brief time. Some of the teachers used this period for arts and crafts. Such activities as fingerpainting, watercolor painting, craftsticks projects, Cryst-L-Craze painting, tissue paper projects, construction paper projects, woodworking activities, and colored chalk work were included in this period during the summer session. From these projects the children made Coke can banks, paperweights, pencil cans, pencil boxes, hand puppets, pull toys, and clothespin paper holders. These arts and crafts

periods were quite interesting and important from the standpoint of providing a truly creative period for these children. The children appeared to be happier during this activity period due to the lower level of frustration experienced and to the opportunities for freedom of expression created. The remaining time in this instructional period was used to complete any unfinished activities of the day.

At 2:45 p.m. the children went as a group to the recreational area. The teachers were provided with a half-hour for preparation, group conferences, or individual conferences before their day ended at 3:15 p.m.

The Recreational Program

The recreational program was conducted by two qualified teachers of physical education. These two men were staff members of the Indiana School for the Deaf; therefore, they had extensive experience in organizing recreation for all types of deaf children.

The recreation period was held for the children Monday through Thursday from 3:00 p.m. to 4:00 p.m. It was not held on Friday so that the children could go home earlier for the weekend. Under the direction of the recreational staff, the children received instruction in several sports. The primary sport utilized with these children was swimming. This particular sport afforded much opportunity for strengthening gross and fine motor skills. It also gave the children a chance to

relieve frustrations due to the relaxed nature it created. In addition to teaching basic skills, the instructors were charged with the responsibility of teaching such concepts as diminishing over-zealousness, taking turns, respect for the rights of others, developing water safety skills, and following directions. It was encouraging to note the development of some degree of skill in physical activity. At least, considerable progress was shown as judged from beginning efforts.

The Dormitory Program

The dormitory program was an integral part of the education of the children enrolled in the summer classes. There were six dormitory counselors selected to supervise the children. These people were employed at the Indiana School for the Deaf and possessed prior experience in working with deaf children with learning disabilities. There were two female counselors in the boys' dormitory and four in the girls' dormitory. This arrangement provided each child with adequate individual attention, insuring a better adjustment to the residential part of the program because all of the students were residential and many of them were away from home for the first time. The lower counselor-student ratio was necessary because the children required more supervision than deaf children enrolled during the regular school year and because the children needed guidance in learning to use their leisure time profitably.

The responsibilities of the counselors to the multiply

handicapped children were many and varied. Their duties included supervision at mealtime, on the playground, at bedtime, during baths, during preparation for school, and on field trips and other weekend activities. In addition, they directed the children from one building to another, provided evening snacks for the children, arranged planned evening activities, and packed the children's clothes for weekend trips home.

The education provided by the counselors was an extension of the children's classroom learning. Throughout counselor duties were opportunities to reinforce or teach concepts such as cleanliness, proper manners, sharing, knowledge of right and wrong, proper use of money, traffic safety, rules for sports, manual communication skills, etc. Without the cooperation of the dormitory personnel, a total education program would not have been possible.

The multiply handicapped children followed the general pattern of activities planned for the regular summer school students. During the six-week experimental program, they had the opportunity to enjoy many weekend and evening activities. Among these activities were movies, trips to a farm and the Indian Museum, swimming parties, picnics, and visits to the Dairy Queen.

In review, the children's daily schedule:

Time	Activity
6:30 a.m.	Arise, make beds, wash, dress, and prepare for breakfast
7:30 a.m.	Eat breakfast

8:15 a.m.	First instructional period in the education unit
10:00 a.m.	Recess--free play and structured activities
10:45 a.m.	Second instructional period
12:00 noon	Lunch
12:45 p.m.	Free and structured play
1:30 p.m.	Third instructional period
2:45 p.m.	Return to dormitory to prepare for recreation
3:00 p.m.	Recreation
4:00 p.m.	Return to dormitory, change clothes, and participate in outside skill activities
5:00 p.m.	Dinner
5:30 p.m.	Free play
6:30 p.m.	Television time
7:00 p.m.	Baths
7:30 p.m.	Opportunity to visit the candy store and spend their own money
8:00 p.m.	Prepare for bed
8:30 p.m.	Lights out

ASSESSMENTS AND RECOMMENDATIONS

FOR THE OVERALL PROGRAM

Members of the staff of the experimental classes for multiply handicapped deaf children offer the following recommendations based on their experiences in the summer project:

1. Take a closer look at the goals for the summer and redefine them if necessary. Should we be evaluating children for our own multiply handicapped program in the fall, should we be teaching, should we be diagnosing problems and making recommendations for management of the child, should we be evaluating children for possible placement in other programs?

2. A major goal should be established and then the short time that is available should be spent working toward that one goal. The program can tend to be too fragmentary and hence ineffective if the teacher must teach, evaluate, make recommendations, etc.

3. There should be less emphasis on the teaching aspect; more concern should be placed on the end product--finding out how each particular child learns, what his weaknesses are, and what can be done best to overcome his problems. In this sense the program would offer more of a diagnostic service and would then be able to more accurately make recommendations for future placement and management of each particular child.

4. It cannot be expected, in the short span of six weeks, to correct each child's weaknesses. More important would be an accurate diagnosis (with the aid of psychological and audiological tests) and a discovery of effective methods of teaching to be used with each individual child.

5. With the younger children, it would be beneficial to have teachers' aids. The aid would not have any teaching duties, but would be available to "keep an eye" on the children while the teacher did individual work. An office aid who would make and run off dittos, type reports, etc., would also be very helpful.

6. It would be beneficial to develop and use more programmed materials for use with these children (such as Project LIFE, Foster's workbook, teacher-made printing books). The development and duplication of these materials should be encouraged.

7. The child's home life and educational opportunities within his home community should be considered when deciding on admissions.

8. A perception test should be available for the children, such as Frostig, the Purdue Motor Survey, or a test for learning disabilities.

9. A specific curriculum should be designed for multiply handicapped deaf children.

10. It would be very beneficial to the children to have an arts and crafts instructor employed for the summer.

11. A more diversified physical education program is needed. Such things as trampolines, putt-putt golf, bowling, baseball, badminton, and volleyball would be good activities to include.

12. One consulting psychologist should be employed for the entire six-week session to insure continuity of psychologist's efforts.

13. Conferences with the psychologist should be held so that the teacher knows exactly how to cope with a particular problem.

14. The psychologist, or another qualified person, should be available to counsel the parents of children in the program so that they better understand the problems of their children.

15. The educational staff should have one or two days to consult with the visiting and staff psychologists to familiarize themselves with the psychological tests to be administered, what the results of these tests indicate, how these indications could be utilized in the classroom, and to get some ideas as to the possible problems which might be encountered; also some discussion should ensue as to techniques to be used with children who exhibit emotional problems.

16. Some time should be set aside (prior to the start of the program) to instruct the educational staff on techniques of parent counseling.

17. The Wabash Center Manual on Learning Development should be obtained and used as a guideline for the staff in this program.

18. The materials purchased or made for the multiply handicapped program should all be stored in one place, catalogued, and made available to all departments on campus.

19. Prior to the admission of children for the multiply handicapped summer program, past educational information should be required. This would help the educational staff set more realistic goals for these children.

20. Establishment of a state-supported regular program of education for multiply handicapped deaf children is recommended, such as a program being in a separate unit yet available to some of the auxiliary services of the residential school for the deaf.

TYPES OF MATERIALS EMPLOYED

Commercial Materials:

There are many industrial-made materials designed for

children with learning handicaps. The difficulty for any educator is to select those items which will best meet the desired goals. This was also a problem encountered by the staff for this summer's program.

The staff was fortunate to have at their disposal both materials purchased for the regular school program at the Indiana School for the Deaf and materials purchased for the summer experimental classes for the multiply handicapped during the summers of 1969 and 1970. In addition, many materials were produced in the summers of 1969 and 1970 by workshop personnel. All the available materials were widely utilized by the teachers and proved most beneficial to the students.

Due to lack of funds, few new materials were purchased for use during this summer program. An inventory of the materials purchased, constructed, and utilized during the past three summers can be found in Appendix C.

Teacher-Prepared Materials:

Since there was no workshop working directly with the experimental classes during this summer, the staff used their experience and knowledge to create materials to meet the needs of the pupils within their classrooms. Examples of these materials can be found in Appendix B.

Educational Techniques:

The educational techniques employed by the classroom teachers in the summer classes were drawn from many specialty areas for handicapped children. The teachers, being qualified in the

area of deafness and possessing classroom experience, based most of their educational techniques on their specialization.

Many educational techniques were used in the classroom during the six-week summer session. The following list of materials and techniques are offered only as suggestions. Most of these teaching activities proved successful with some portion of the summer classes. In addition to the list found below, the staff experimented with numerous techniques for children with learning disabilities. These specific techniques are found in Appendix A.

The following activities have been categorized according to content areas:

MATERIALS

I. For Attention Span Increase
   A. Borders in colors
   B. Overhead projectors
   C. Cardboard screens

II. For Language Development
   A. Workshop materials (see last two summers' materials books)
   B. Tell box
   C. Fitz-Hugh-Plus program
   D. Polaroid pictures for experience stories
   D. Teacher-made movies

III. Visual Discrimination
   A. Faces and stick figures
   B. Perception puzzles
   C. Likenesses and differences
   D. Simple commercially-made language workbooks
   E. Sorry board
   F. Configurations
   G. Fitz-Hugh-Plus program
   H. Project LIFE

IV. Auditory Discrimination
   A. Language master
   B. Tape recorder
   C. Records
   D. Sights and sounds

V. Writing
   A. Teacher-made writing books
   B. Programmed alphabet books
   C. Acetate folders
   D. Frostig pre-writing exercises
   E. Kinethetic alphabet cards

VI. Math
   A. Money
   B. Play grocery store
   C. Trips to commercial establishments
   D. Programmed workbooks

VII. For Cerebral Palsy Involved Children
   A. Typewriter training
   B. Maximum exercise
   C. Clay work for more hand flexibility
   D. Gross and fine muscle exercises

VIII. Beneficial Recreational Equipment
   A. Croquet set
   B. Putt-Putt golf course
   C. Tennis rackets and balls
   D. Baseballs and bats
   E. Twister game
   F. Access to a bowling alley
   G. Trampoline work for older children
   H. Swimming
   I. Volleyballs
   J. Footballs

IX. Beneficial Field Trips
   A. Fire station
   B. Farm
   C. Grocery store
   D. Shopping center
   E. Bakery
   F. Restaurant
   G. Zoo
   H. Park
   I. Picnic
   J. Children's Museum
   K. Library
   L. Dairy
   M. Walks
   N. Indian Museum

Special Experimental Materials:

Project LIFE--The staff utilized the Project LIFE series with

all of the children admitted to the summer school program. Each class used the series for 45 minutes to one hour each day. Some of the children were able to progress very quickly on this series while others (especially the young children) were much slower in acquiring the necessary skills needed to utilize adequately this project.

The following are the recommendations and evaluations compiled by the educational staff upon completion of their six weeks use of this project.

Evaluations:

1. This project is very worthwhile in improving the visual perception skills of the children.
2. It is an excellent device for capturing interest and lengthening attention spans.
3. It is very helpful in building language, vocabulary, and reading skills.
4. It is a good approach to the total learning process.
5. It can be used at the child's own pace.
6. It is an excellent way of reinforcing overlearning without becoming a "drill" form of learning.
7. The pictures are clear and easily understood by the deaf.
8. The progression of the series is gradual, which is very good, particularly for multiply handicapped children.

Recommendations:

1. Filmstrips should be replaced when they become worn and scratched. These defects often interfere with the child's learning, especially in the visual perception section.
2. With multiply handicapped deaf children, more time is needed to complete the filmstrips. Some children may need as long as an hour on a complicated filmstrip.

3. For use with multiply handicapped deaf children, the record sheets should allow for more than one repetition. Often these children need three or four repetitions on a complicated film.

4. Less complicated and complex equipment so that fewer breakdowns occur would be helpful.

Liz Foster's Workbook--This workbook was used by each child enrolled in the summer classes. The following are the evaluations of this workbook as determined by the academic staff.

Evaluations:

1. This workbook provides a good supplement to the total learning approach.

2. The children are able to work at their own pace.

3. It is an excellent way for reinforce overlearning without becoming a "drill" form of learning.

4. It provides an additional opportunity for writing practice.

5. The book provides the child an opportunity to check his progress and to refresh his memory. This can be done by allowing him to look back to previous pages completed.

6. For very slow multiply handicapped children the progression is too rapid.

7. It appeared too easy for the older multiply handicapped children but provided them a pleasant success opportunity.

PROFESSIONAL CONSULTANT

A clinical psychologist, experienced in working with deaf children, was engaged as consultant for the experimental classes project. He was Dr. Robert A. Wagoner, Crossroads Rehabilitation Center, Indianapolis, Indiana. His major responsibilities were: (1) to test and evaluate the individual children, (2) to provide guidance and assistance for the staff, (3) to prepare and submit an overall project evaluation report, and (4) to make recommen-

dations for future educational programs for multiply handicapped deaf children.

Dr. Wagoner was able to devote two weeks to the project. He came the second and sixth weeks of our summer program. During this time he gave psychological tests to the children, prepared evaluations and recommendations, observed in classrooms, and retested the children to note any progress or changes that had occurred.

The reports of this consultant contained some excellent suggestions. The assistance of Dr. Wagoner greatly contributed to the success of the project and should prove to be valuable in establishing meaningful guidelines for future educational programs for multiply handicapped deaf children.

EVALUATION PROCEDURES

The evaluations of the consulting psychologist were most beneficial to the success of the total program; however, it was felt that frequent evaluations should be made in order to keep a constant check on each child's progress or lack of progress throughout the total program--academic, recreational, and dormitory activities. In this way, alterations in the programs could be made at the most opportune time to meet the needs of the students.

During the previous summer program, Dr. Collins, one of the consulting psychologists, devised several rating forms. These forms were for use by the academic staff, physical education

staff, and dormitory staff to evaluate the children as they functioned in their particular activities. These forms were based on a scale from one to five, with one being the highest and five the lowest. These forms were turned in to the director at the end of each week. The director compiled the information for each child on a compilation chart so that the child's progress could be noted at a glance. The various personnel utilizing these forms were encouraged to make comments on the bottom of the forms each week. Then these comments were copied onto the back of the compilation charts. (Examples of these charts and rating scales can be found in the report booklet from the 1970 summer program.)

During this summer program the educational staff utilized the above-mentioned evaluation sheets. This staff felt that these evaluation sheets were somewhat inadequate to deal with the many facets of the academic possibilities for these children. Therefore, the following criticisms and recommendations were made:

1. A rating scale (1 to 5) is an unreliable, unrealistic measurement of "academic progress." These forms fail to recognize all of the important possible areas in which the child can succeed academically. It includes only the areas of reading, writing, and arithmetic, plus a few social skills. It does not measure pre-readiness or readiness skills such as visual-motor skills, etc. The form is thus unfair to the child who is not yet ready to begin reading words, doing subtraction work, or writing sentences.

2. The forms are not concise enough--they offer no explanation to help assess each academic area. For example, "reading--words" could mean the child can match similar words, can see differences in visual configurations, can match pictures to words, or can match picture to word by memory but

without true understanding. This vagueness can cause great discrepancy between scores from one teacher to another, or from one week to another.

3. It is not clear to whom the child should be compared. Should the evaluation be in relation to his normal hearing peers, to his deaf peers, to his classmates in the summer program, or to his own capabilities? In order to rate a child average, or above average or below average, "average behavior" must first be very specifically defined.

4. The goals in the program should be examined and then related back to the evaluation forms. If the duties of the summer program staff are strictly diagnostic in nature (as is recommended), how can the child's scores be expected to improve from week to week?

5. It is the feeling of the staff that these evaluation sheets should be eliminated (especially for the young multiply handicapped child) in favor of weekly teachers' reports on each child's progress, plus diagnostic testing procedures. Or better yet, that provisions be made to develop adequate developmental skills for hearing children, average deaf children, average mentally retarded children from the ages of 3 1/2 years to 12 so that it would be possible better to rate the capacities of these children in relation to the other types of children at a given age. This could prove invaluable to future diagnostic evaluations of these and other deaf children.

During the final days, the classroom teachers wrote reports on each child enrolled in the summer program. These reports included information concerning academic successes and failures, character and personality, and recommendations for future needs of the children. These reports were used to discuss the child's advancements and needs during parent conferences which were held the last day of the summer session. These reports were then placed in an academic folder for future use.

PARENT PARTICIPATION

Since the children came from all parts of Indiana, it was difficult to develop any kind of effective program involving

the parents to any great extent. Most of the work with parents was done through correspondence. Parents were encouraged to visit the classes at any time and to confer with the classroom teacher and/or the supervising teacher. Their visits, however, were limited and occurred most often on Friday afternoon when they came to the school to take their children home for weekend visits. Also several brief telephone conferences were held when parents called to inquire about their child's progress and adjustment.

During the final day of the summer session individual conferences were set up with all parents who desired them. Many parents requested such conferences. In the conferences, discussion centered around what the parents could do at home to further the child's learning acquired during the summer, what the child needed in the way of school placement where possible, and what specific educational goals still needed to be accomplished with the child. This type of conference should be beneficial to the continuation of the child's educational needs within the local community.

INTEGRATION WITH OTHER SUMMER PROGRAM ACTIVITIES

The experimental classes project was an integral part of the total 1971 summer program at the Indiana School for the Deaf. Though the actual classroom instruction and other school activities were conducted in a separate building, there were numerous opportunities for social interaction and training in the dormitories, the dining room, on the playground, and in

other areas. The older boys and girls enrolled in the high school section of the summer school for regular students voluntarily provided most valuable assistance in helping to supervise the multiply handicapped children at meals, on the playground, and in the dormitories. This interaction was extremely beneficial to both groups. It provided the older deaf students the opportunity to give of their time and skills to help others who were less skilled. It also gave them a chance to recognize that there existed children less fortunate than they. For the multiply handicapped children this provided an opportunity to increase through practice their skills in manual communication, in motor functions, and in social behavior. Thus, everyone benefited through this interaction.

DISPOSITION OF THE STUDENTS

Upon completion of the six-week experimental summer program conducted for the multiply handicapped deaf child, decisions as to placement for the 1971-72 school year had to be made.

The recommendations for placement made for these children were based on careful study of the rating forms from the departments of the summer school program, recommendations from the staff and from both the staff psychologist and the consulting psychologist, review of available educational programs within each child's community, and close observation of the students during the total program. Using these valuable criteria, five children--three boys and two girls--were admitted to the year-

round multiply handicapped program on the Indiana School for the Deaf campus, and six children--two boys and four girls--were admitted to the regular school program at I.S.D. on a trial basis for the 1971-72 school year.

For the remaining twelve students who were not admitted to either of the above described programs being offered at the Indiana School for the Deaf during the 1971-72 school year, recommendations were made that they return to their existing local community programs for education. It was with regret by the project staff that it was necessary to make these recommendations. It was, however, a fact that most of the children had profited from their local school programs and would continue to advance educationally when they returned. Among the reasons that these children were not admitted were: marked mental retardation, emotional difficulties, severe educational lags, poor physical control, and inability to cope with a residential program.

PUBLIC RELATIONS

Newspaper:

At the beginning of this summer program, a reporter came to the I.S.D. campus requesting permission to write an article with pictures of our summer multiply handicapped classes. Permission was granted and she spent all day observing the total program and talking with numerous people. The article in the Eastsider was the result of her visitation.

This type of publicity is especially helpful to the school and to our program in particular. It makes the public aware

that these children exist and there is some program functioning to help further the academic capabilities of these children. Also perhaps it could create an interest within the community that could open doors to provide monetary assistance, legislative assistance, or a variety of other opportunities.

Visitations:

During the six weeks that the experimental classes were in session, a total of 40 people came to visit the program. These visits included observation of the children, demonstration in use of some of the special materials designed for the multiply handicapped children, and discussions concerning the experimental classes and the school in general.

These visitors to the program represented many different phases of the educational spectrum. Some were students in Special Education at Purdue, Butler, Valparaiso, and Ball State. Sometimes these students came in groups but often they came alone. There was also a family from outside the state of Indiana who brought their family to see our program. This family had a deaf child and was seeking admission to I.S.D. One visitor was a therapist from LaRue Carter State Hospital who was interested in the techniques devised to use with their children. Another couple were audiologists who had come to view the children from an audiological viewpoint. And perhaps the most unusual was a therapist from France who had come to compare the programs for special education available in the United States with those in France.

As a whole, the visitors all appeared very interested and enlightened by their visits. In some instances, they requested opportunities to visit again during the regular school year. These are the types of experiences that serve to inform and enlighten the public concerning the children found in various areas of special education and in this instance, the deaf child in particular.

SUMMARY

Much valuable information was gained through the 1971 summer experimental classes for multiply handicapped deaf children. In order to have a successful program, criteria must be established encompassing all realms of education. To insure that education is the main goal for this program, the selection of students and staff must be done with care. Teachers need to be well-educated and experienced to recognize the needs of each child and to design an educational program geared to the improvement of the educational level of the child. This requires a professional teacher who is willing to spend many hours beyond the school day for necessary preparation.

It is important that the academic program be flexible for these children. Besides the instructional program the children need free play, rest, and craft periods for tension release. Instructional as well as entertaining field trips should be provided. Every opportunity should be provided to meet the academic, social, and physical needs of each individual child.

The utilization of materials and the selection of class-

room teaching techniques should be those that best meet the needs of each individual child. Once these needs are challenged, usable evaluation techniques should be available for implementation. Once the evaluations have been made the parents should be encouraged to take an active part to reinforce the classroom education. They in turn should be encouraged to communicate the child's improvements at home to the teachers. Professionals should be available to counsel with these parents so that the important new ideas, techniques, and concepts can be understood and implemented.

Time is going quickly, especially for the multiply handicapped child. He needs education now. Perhaps through the experiences during these summer experimental classes, requirements necessary to the success of any program serving multiply handicapped deaf children have been established. It is hoped that the comments and suggestions contained herein will serve as an encouragement to others to establish suitable programs for these multiply handicapped deaf children. Perhaps through the cooperation and efforts of these summer classes and the community schools, "now" can be just around the corner for these children.

APPENDIX A

SPECIFIC EDUCATIONAL TECHNIQUES

The Use of the Typewriter with Multiply Handicapped Deaf Children

The Experimental Classes for Multiply Handicapped Deaf children were confronted with many problems when trying to evaluate and recomment the cerebral palsy children. The biggest problem that confronts these children is the lack of an easy and clear way to express their wants and desires. Their handwriting was very labored and awkward. The children consumed long periods of time and energy writing their assignments in the classroom. This is the reason that the typewriter was used with these children. It was hoped that with this avenue to communication they could eventually type their lessons and other material without getting behind the other children in the classroom.

The teacher used many finger exercises to strengthen the muscles for typing. The following exercises were used:

1. Work with modeling clay
   a. Squeeze the clay with the fingers used in typing.
   b. Punch at a ball of clay making an impression in it.

2. Punch the table with one finger (the teacher found that one finger is best suited for typing). A board with the correct outline of the typewriter keys was made and the child punched at the outline of the keys.

3. Let the child work with the typewriter. Let him become familiar with the machine.
   a. Type at random.
   b. Type the alphabet.
   c. Type with a space between each letter.
   d. Type short words, then phrases, sentences, etc.

These steps should be taken very slowly and emphasis should be placed on repetition.

Wrist weights were used to slow down spastic movements of the hands. The weights can be easily made or bought in a store. Fishing weights can be used after the recommended weights to be used are found. Adhesive tape can be used to make temporary wrist weights.

To determine the best weight for the child, a temporary wrist weight should be made up at the lowest recommended weight. The child should wear it for two weeks while the teacher observes the effect and performance with the weight. Repeat this procedure every two weeks until the desired weight has been reached and no more improvement has been observed.

Recommendations for improvement:

1. Use an electric typewriter.
2. Set up a designed program to use before attempting any remediation.
3. Set up regular time periods for practice each day and give the child enough rest periods at the beginning so that he will not get tired.
4. Recommend home practice.

The program that was set up for the two cerebral palsy deaf children has helped them to express themselves as well as attain a level of efficiency in the classroom. They are now able to complete their work in the classroom and it is readable enough for the teacher to make corrections. This will help some of these children participate in a classroom-type situation.

The Use of Behavior Modification

Subjects: 5 children; 2 boys, 3 girls
Ages: 8, 9, 10
Objective: Change their behavior toward school work and at same time reinforce the concept of the value of money

The teacher explained to the children that they would receive tokens (poker chips) during the day, if they completed their work correctly both in group activities and individual seatwork. Names were put on transparent plastic glasses and the children kept their glasses on their desks. At the end of the day, the children traded the poker chips for candy and toys. If they had 1, 2, or 3 chips, they received a glass of Kool-Aid; 4, 5, or 6 chips, a malted milk ball, a tootsie roll, and a piece of bubble gum; 7, 8, or 9 chips, a big candy bar or a sucker; and 10, 11, or 12 chips, prizes such as bubbles, a flag, ball and jacks, comb and brush, barrette, etc. The children seemed to be quite motivated in trying to attain the larger goal of 10, 11, or 12 chips. They became more motivated toward school work and completed their individual papers in half the time it had previously taken them.

At the end of the second week, a store was set up in another classroom. The same type of rewards, candy and prizes, was used. The teacher did discontinue using the chips and instead used pennies, because the children needed reinforcement and experience in the use of money. The teacher wore an apron with pockets so that the penny could be given to the child immediately when the task was completed, along with giving praise.

Prices on the candy and prizes were established: 1¢, 5¢, 10¢, 25¢, 50¢, and 75¢, and the children exchanged pennies for nickels, dimes, and quarters. During the last two weeks of school the teacher asked the children to go to the store and purchase a tomato, a box of cereal, etc. This activity was followed with a field trip to a grocery store where they could see the prices and buy food for the picnic they prepared on the last day of school.

Results: This type of a reward system was extremely beneficial to these children in the development of self-confidence, academic and social motivation, and success as opposed to failure. It was considered to be an indirect reinforcement for learning the concept of money, and it provided a learning experience which will help them in the transition from a structured academic situation to an unstructured, independent life in the community and the employment situation. The teacher was then able gradually to fade out the biological need of food to a social reward of praise.

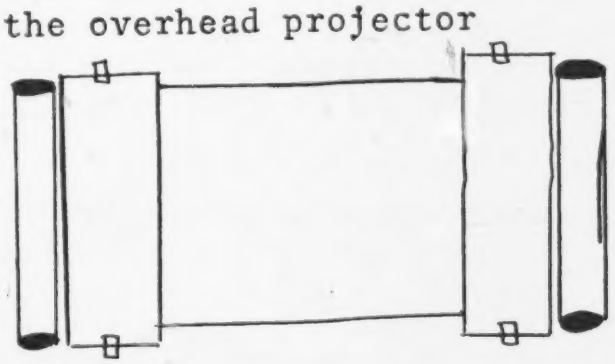
Materials and Methods for Assessing and Developing Visual Memory Skills

A good visual memory can be an important asset to any child, and especially to the deaf child who must rely heavily on visual clues in his environment. Visual memory is very important in the areas of reading, writing, lipreading, fingerspelling, and sign language. If the child does not have the

necessary memory skills to associate a symbol in the visual form with its corresponding object or idea, he faces serious difficulties in academic areas.

The following experiences and materials are designed to help the teacher assess the child's visual memory span and work toward improving it.

I. A device to be used with the overhead projector

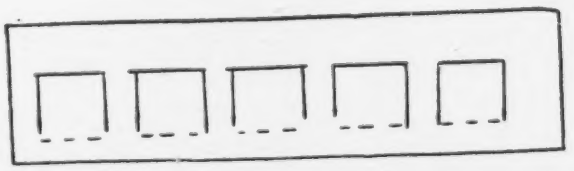


Materials

overhead projector
tagboard
set of colored blocks
set of colored felt-tip pens
sheets of acetate
masking tape

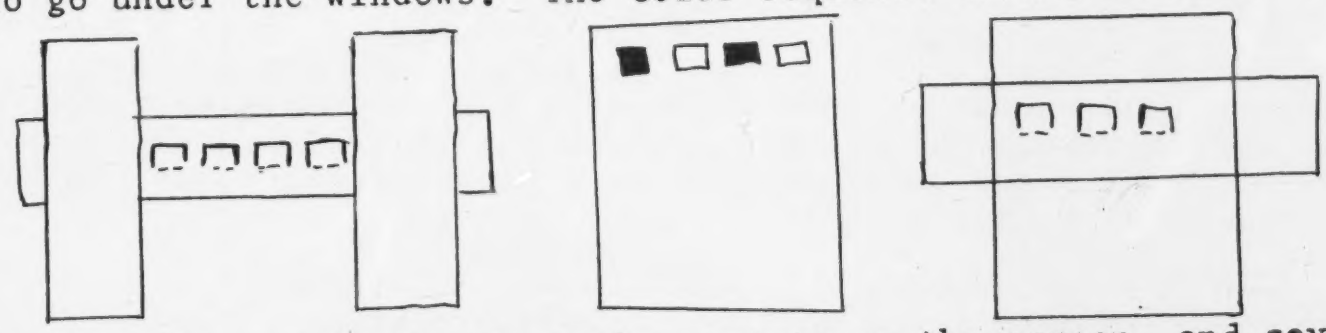
Take two strips of tagboard, approximately 3" wide and 12" long, and tape them to the overhead projector, as illustrated. This provides a frame to hold firmly the sliding strip described below.

Next take a strip of tagboard and cut flip-up windows in it. The windows should not be cut out entirely--cut 3 sides and fold on the bottom side. The windows should be 1"x1" and 1/2" apart.



The card fits into the frame and is held by the small strips.

Take a sheet of acetate and draw a series of small colored squares to go under the windows. The color sequence should be varied.



Turn on the overhead, place the acetate on the screen, and cover it with the card. Place the colored blocks in front of the child.

Flip up one or two windows, showing the colored square beneath. Expose this for a few seconds and then cover it up again. See if the child can choose the correct colored blocks to correspond to the colored squares on the overhead. Be sure the child puts

the blocks in the proper sequence. You may have to allow the child several peeks, and be sure to note how many exposures are necessary for the child.

NOTE: Is is important that you be testing only visual memory skills for purposes of assessment. You must therefore be sure that the child is able to match color to color. If his matching skills are weak, you may find that you are testing visual matching rather than visual memory. Be sure to test the child's matching abilities before attempting assessment of memory.

Try to build gradually the child's visual memory from two or three squares to several, at the same time decreasing the number of times the child must look at the sequence.

ADVANTAGES:

1. The teacher has the advantage of giving the child an "instant check" on his work. If the child needs to be rewarded for each correct response, the teacher can lift up one window after the child has correctly identified the first color in the sequence. She can gradually encourage him to choose two blocks before she shows him that his response was correct. With other methods the child often has to wait until the entire sequence is finished before he can check his work. This delay is often too long for the child who lacks self-confidence in his abilities or for the child with a limited attention span.

2. The child's attention is focused on the screen and squares, thereby helping to eliminate distraction.

3. The image on the screen is enlarged, helping those with poor vision or with vision perception difficulties.

4. Visual sequence skills are developed, which may aid in overcoming or assessing reversal problems.

5. Spelling visual memory skills associated with spelling may be developed by substituting letters for colors. Only a few letters of a word may be exposed at a time, and the number of letters exposed may be increased until the child has mastered the entire word. The teacher can ask the child to remember and copy the sequence of letters on a piece of paper, on the board, or on a "magic slate."

Exercises to Assess and Develop Visual Perception

A deaf child's success in school is often heavily dependent upon his ability to follow visual directions. The following

exercises are designed to help the teacher assess this ability and also provide practice materials to aid its development.

Materials

1 large sheet of construction paper for each person
scissors
paste
pencil
crayons
sheets of colored construction paper--same number, size, and color for each child

The teacher places a large sheet of paper on the board or on an easel at the front of the room. This will be the sample sheet that the children will copy.

The children are seated at their desks facing the board and the teacher's sample sheet, and the teacher passes out the materials to be used.

The teacher then picks up one sheet of colored paper and shows it to the children, directing them to find the same color. For assessment purposes, she should not correct the child if he makes an error. The teacher then draws a shape on the paper, directing the children to do the same. She cuts out the shape, as do the children. Finally, she pastes the shape on her large sheet of paper, asking the children to do the same.

The teacher continues, placing one shape at a time on the paper, until the desired picture is completed (see samples).

The teacher can analyze the child's completed picture and note the child's attention to:

color matching--If the child did not match colors to the teacher's sample, he may not be able to visually distinguish color differences. Further assessment should be made.

size matching

position on the page--The child may have spatial orientation problems if he did not match positions of the shapes.

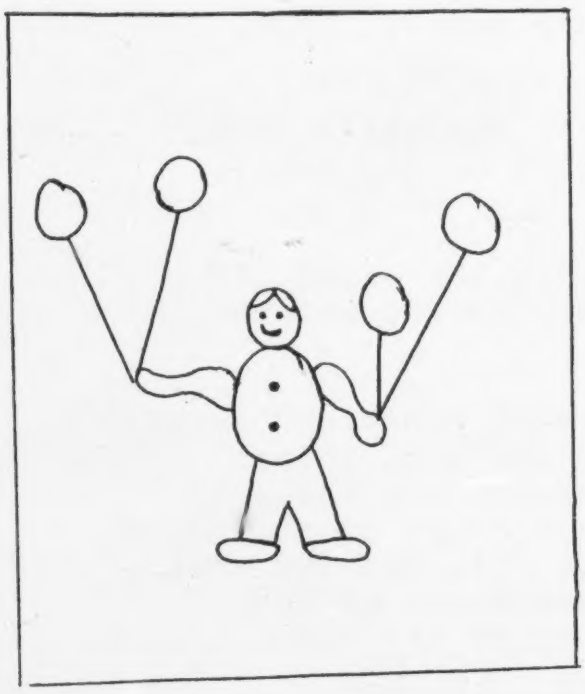
general configuration of shapes--If the child did not accurately draw and cut out a square, circle, etc., these problems may lead to difficulties in visual perception associated with printing and reading skills.

A more advanced version of the previous exercise:

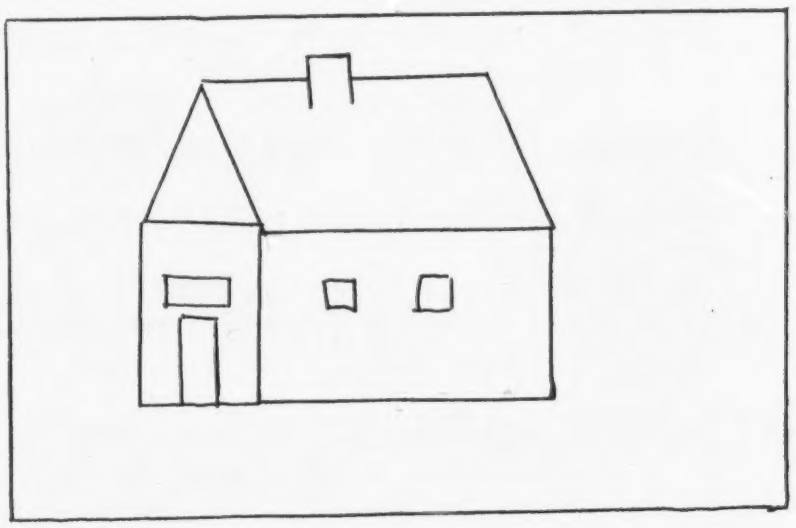
The teacher can have her entire picture completed before she shows it to the children (instead of doing it with them piece by piece by piece). For this exercise, the child must possess the additional skill of being able to distinguish part from whole.

Sample Pictures

Balloon Man



House (a very simple activity)



Experimental Teaching Technique Used
with Multiply Handicapped Children

Suggestions for Pre-Pencil and Paper Work with Configurations

Gross Motor Coordination

Some examples include:

1. Walking around configurations on the floor (socks off). Sandpaper, tape, carpeting, cotton, etc., could be used. (Child could be blindfolded later on.)

2. Throwing bean bags through configurations cut out from cardboard.

3. Push things (cars, blocks, etc.) around outlines of configurations.

4. Trace configurations in sand, flour, salt, clay, etc.

5. Teacher displays a configuration for 10 seconds--child reproduces it in the air with "magic wand."

Fine Motor Coordination

Some examples include:

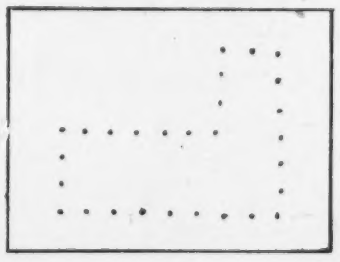
1. Cut configuration patterns out of wood. (When working with colors, the wood could be painted different colors.) Visual memory work could be effective when using these tactile objects.

2. Use the flannel board for tracing purposes.

3. A puzzle board. Indented, cut out configurations are on the board. Child puts pieces in correct indentation, and then could trace around configurations with chalk, etc.

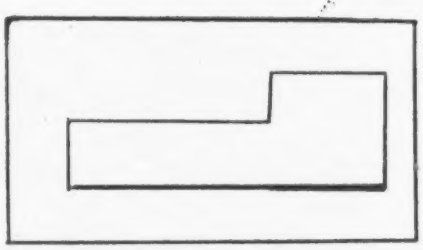
4. Placing exercises--place pieces of paper on the corresponding wooden configurations.

5. Make a design on tagboard the same size as a piece of pegboard. Push holes around the configuration, and place on pegboard. The child places pegs around the design.



6. The child could paint, put glitter, macaroni, clay, etc., around the configurations.

7. Configurations could be cut out of heavy cardboard. The child colors inside the configuration, hitting the sides of the cardboard. Gradually reduce the thickness of the cardboard, then to tagboard, then paper. After the child has been successful in the above tasks, pencil and paper exercises are given.

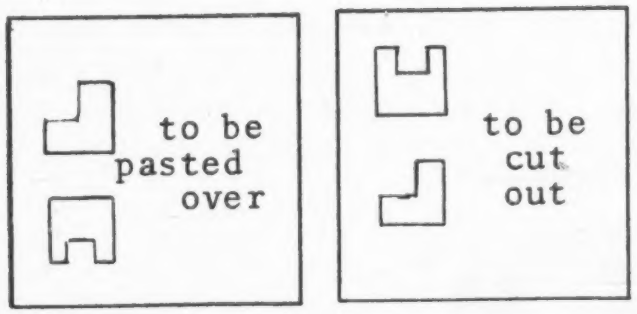


Configuration is a technique used with children who exhibit problems in the areas of visual perception. This would include figure-ground perception and spatial perception problems. This technique is simple to utilize and seems to help hold attention easily.

Problems of reading, writing, spelling, and language appear to be helped most by configuration. This may be chiefly because configuration works with the whole word shape first and proceeds gradually until the word is broken down into segments.

The following examples were used by a teacher to teach colors to multiply handicapped deaf children. These same ideas can be utilized to teach nouns, verbs, etc. They can also be utilized as a help for writing and word placement in sentences. Actually the imagination can run wild when it comes to devising the various uses for this technique.

Like many other methods, this one can be started by matching. This can be done on a flannel board, with cut-out wooden shapes, or with a cut-and-paste ditto such as this:



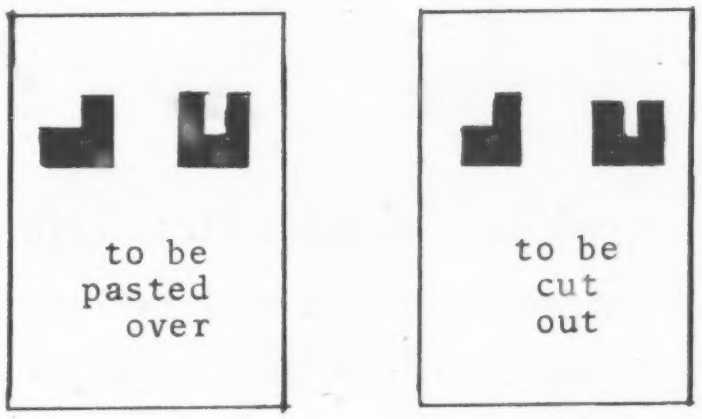
These dittos may first be colored solidly with black, then they progress to the shapes being only outlined in black; then colored solidly in the color the configuration represents; then outlined in the appropriate color for the color represented; and finally, the child outlines the shape in the appropriate color. The above-mentioned steps are preliminary ones to introduce the configurations. Now the actual word is introduced into the appropriate configuration. This introduction consists of a graduated workbook with 4 or 5 steps per word that begins with matching word to color and proceeds until only the word is used without the configuration (see example).

The final step is a test booklet that tests the learning that has occurred from the above techniques. A sample of this test will follow.

The teacher utilizing this technique felt that it was a great asset in helping these multiply handicapped deaf children learn, and more important, retain the concepts involved with the colors. They not only master the color recognition concept but also the concept of the writing, spelling, and reading of the color words.

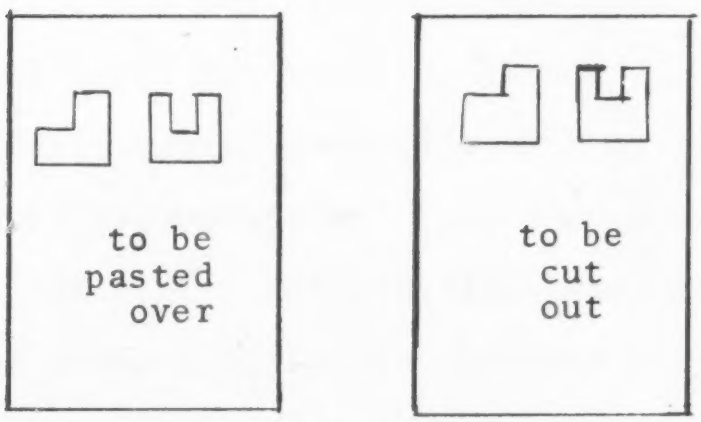
The following are examples of the earlier mentioned activities:

Step I



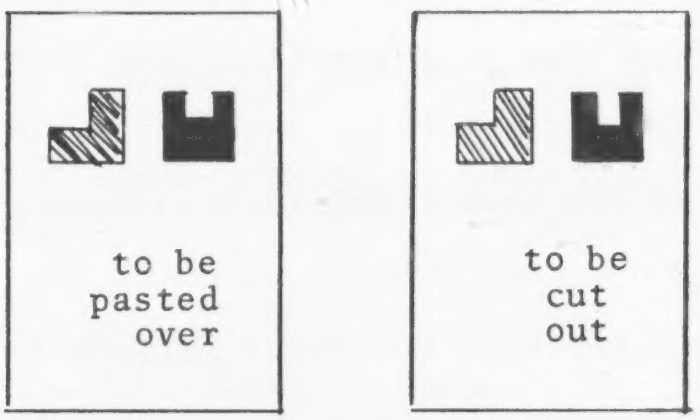
solid black shading

Step II



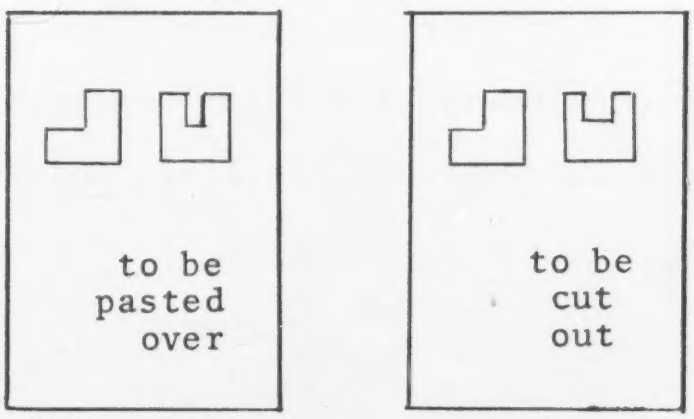
outlined in black

Step III



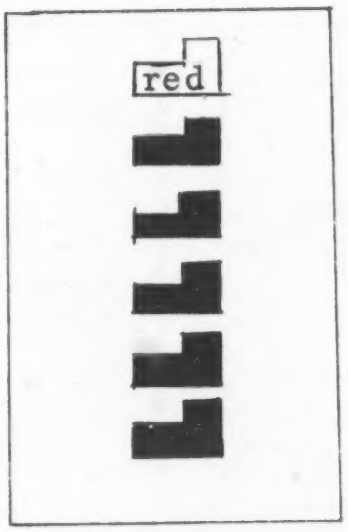
shaded in appropriate color

Step IV



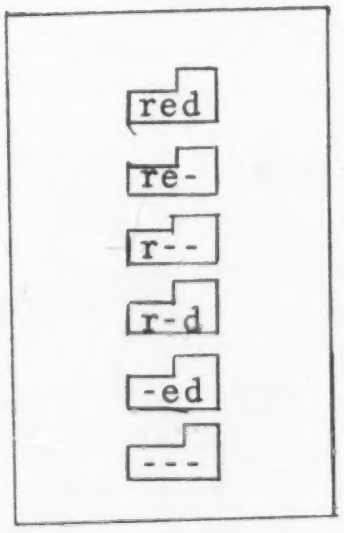
outlined in appropriate color

Step V
Introduce
word.



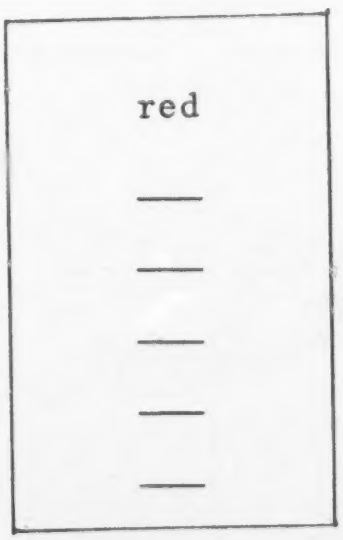
Color to match word.

Step VI



Use color coordinated pencils to fill in the missing letters.

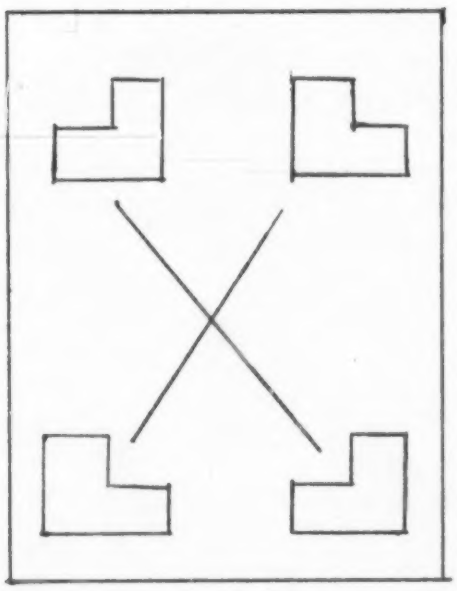
Step VII

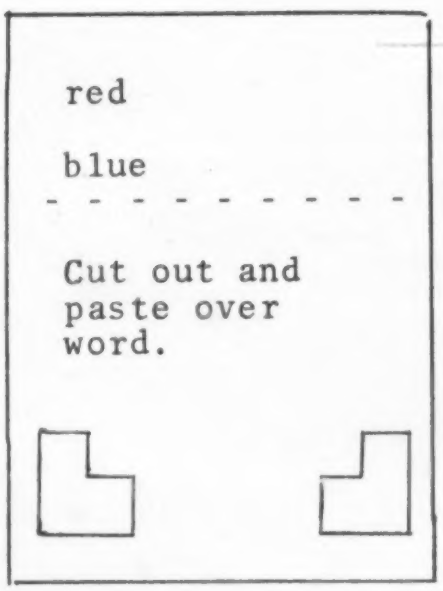


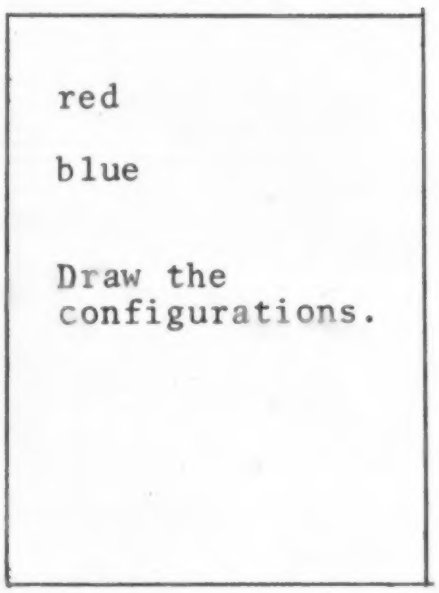
Write word without configuration.

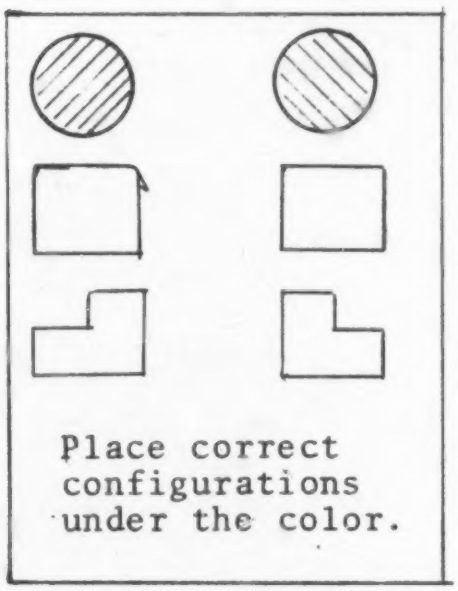
These steps are repeated for all of the colors.

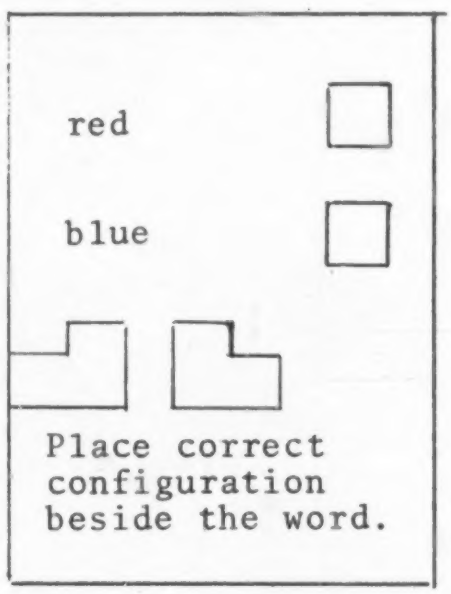
Here are a few pages from the test booklet.

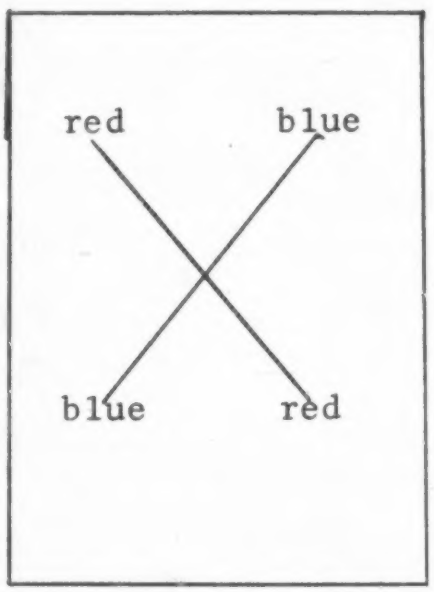


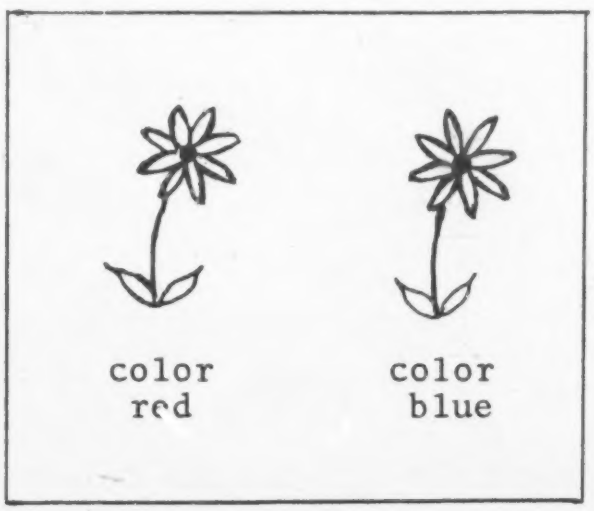












APPENDIX B

TEACHER-MADE MATERIALS

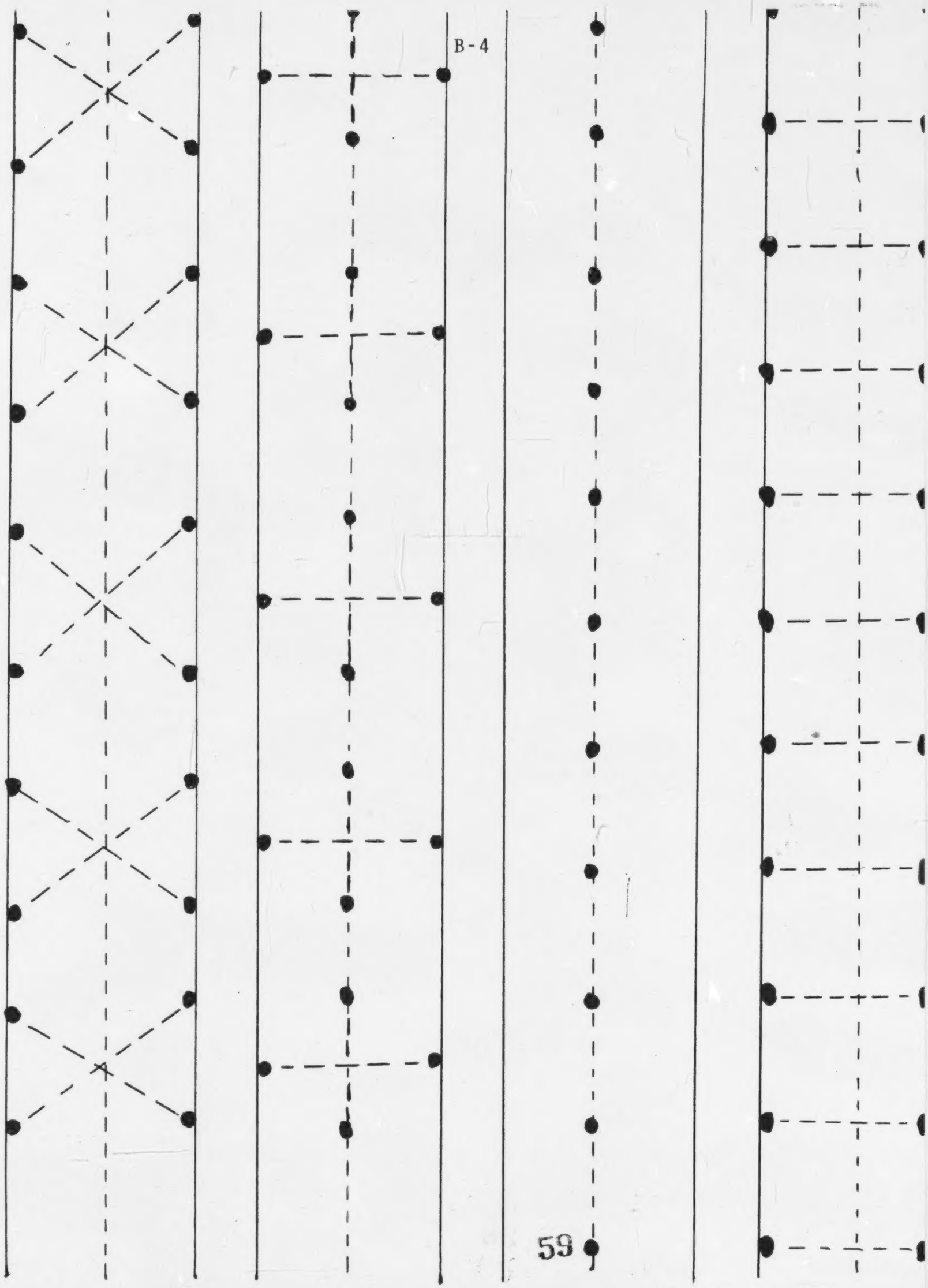
Teacher-Made Printing Books

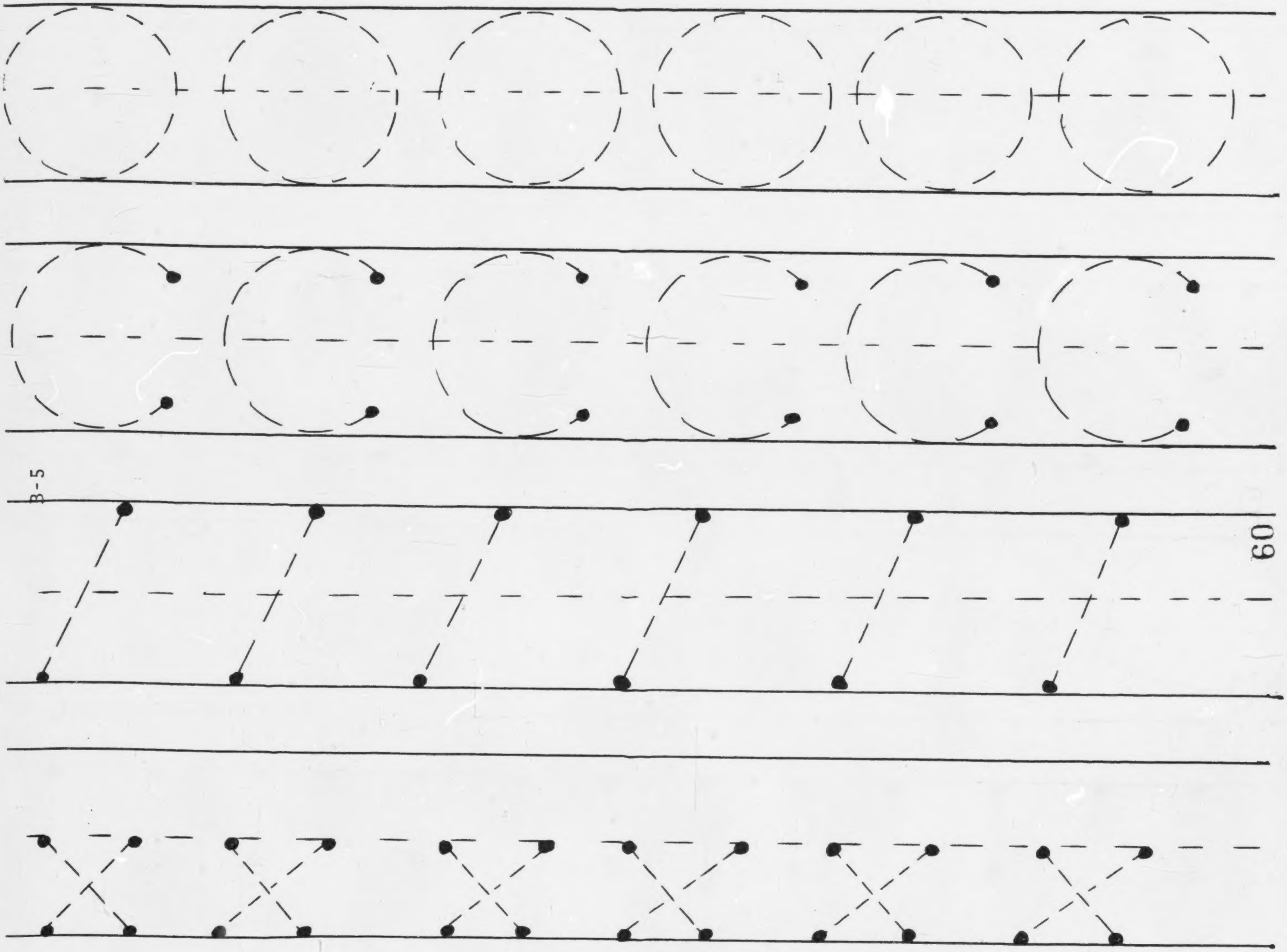
These books are designed for beginning printing experience. They are not meant to teach the child how to print various letters, but are designed to provide practice material to develop the fine motor skills necessary for printing.

Advantages:

1. Because the books require little instruction, the children are able to work on them independently. This frees the teacher for other work.
2. The books provide practice material to develop fine motor skills necessary for printing.
3. The book introduces all of the basic forms used in manuscript writing (horizontal line, vertical line, slanted line, circle, half-circle) in their most simple forms.
4. The book utilizes a developmental approach, progressing from simple to complex forms.
5. The book provides the necessary repetition for developing motor skills. The teacher can provide several sheets of the same page in order to give the child more practice on a particular form. This also provides an individualized approach.
6. The young child can have his own "book" (which they often miss in the pre-school year).

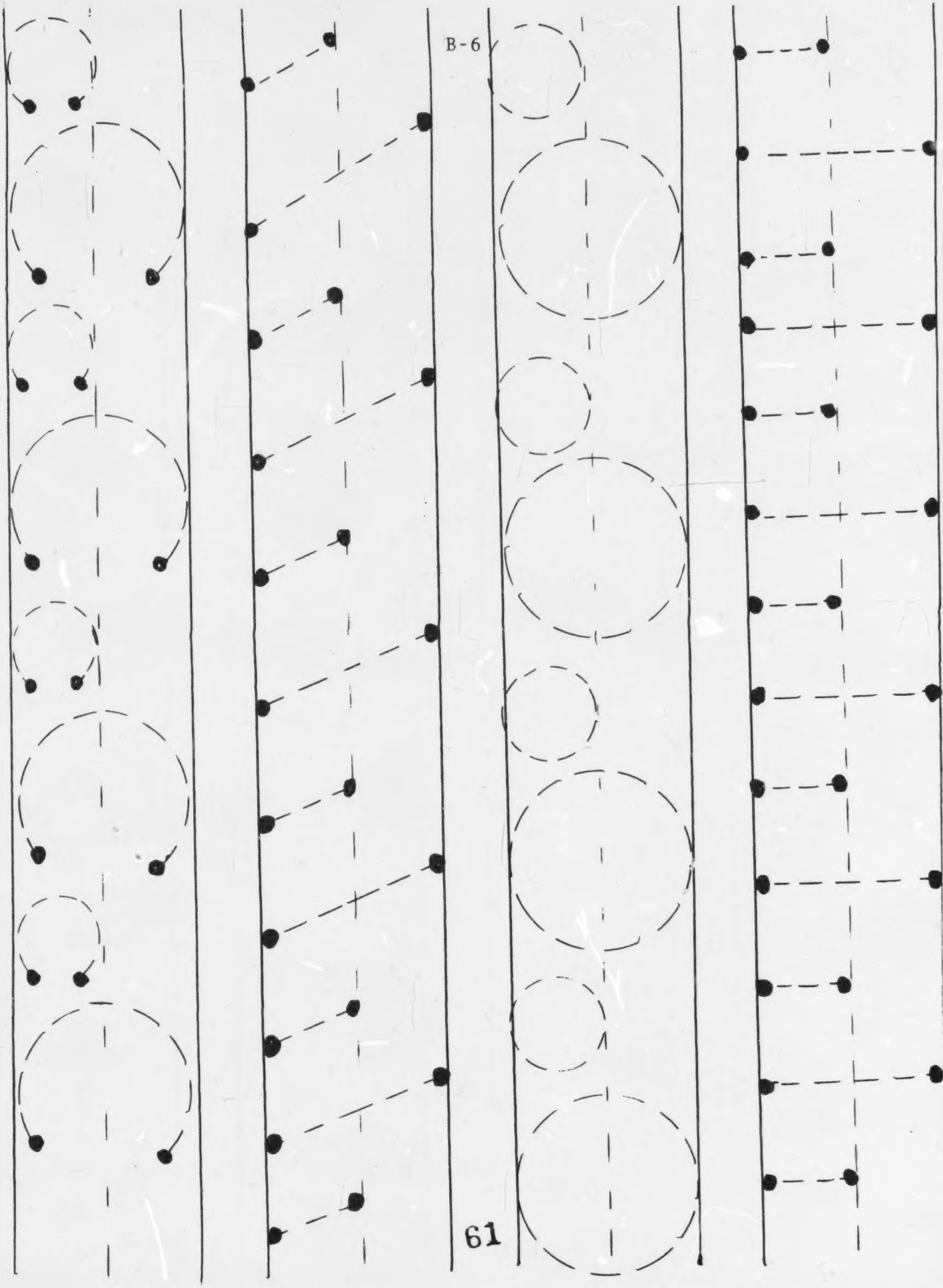
Example pages from the book follow.
One page (four lines) is devoted to each design.





B-5

60



Arts and Crafts--Banks Out of Pop Cans

Materials

cans
wallpaper samples
glue
scissors
glitter

The children glued a piece of wallpaper around their cans, and then glued glitter on top of the cans.

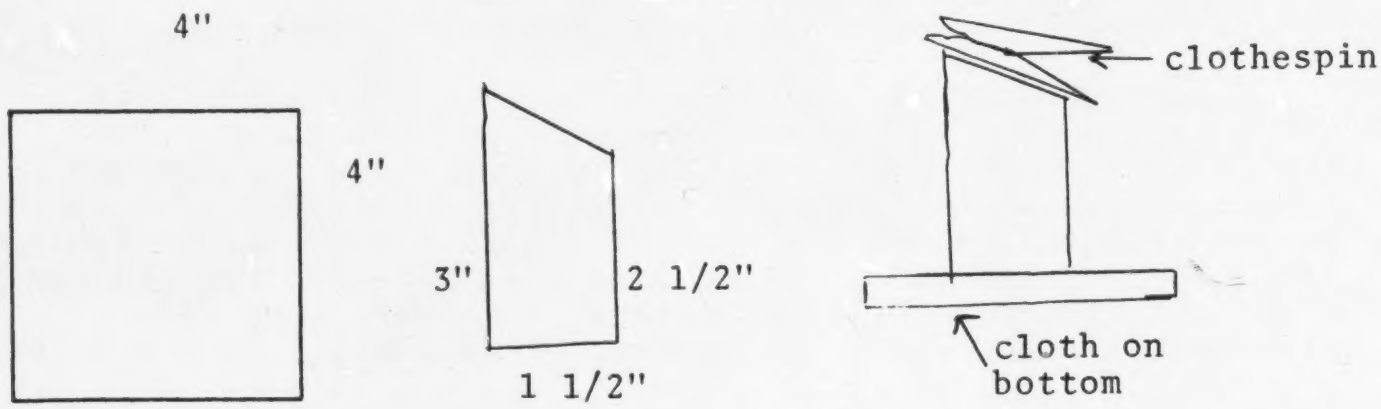
They had a great deal of difficulty getting the wallpaper around the can. It is suggested that the children work with placing and pasting on a three-dimensional object (squares, blocks, etc.) first, before attempting this activity.

Memo-Holder

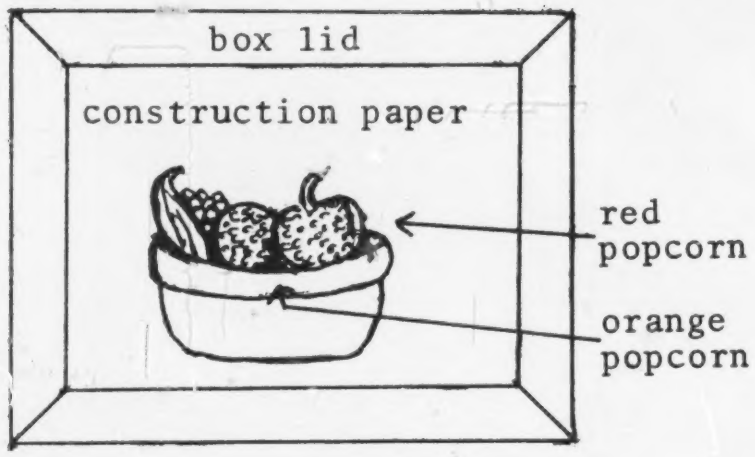
Materials

wooden clothespin
two pieces of wood
glue
varnish
piece of cloth

This is a very good project for the children. The pieces of wood are glued together with the clothespin on top (see diagram). A piece of cloth is used to cover the bottom, and varnish is applied to the wood.



Mosaic Popcorn Picture



Materials

ditto pictures
box lids
construction paper
paste
glue
colored popcorn (unpopped)

Ditto off any picture (for example, a basket of fruit having the colors yellow, green, blue, red, and orange). Put construction paper on the inside of a box lid (any size can be used). Cut out the dittoed picture from the page. Paste the picture onto the construction paper. Put glue on a small portion of the picture, after sorting the popcorn into various colors, and begin placing and gluing the appropriately colored popcorn onto the picture.

This exercise is good for sorting and discrimination of colors, fine coordination, and observing if the children start from left to right, top to bottom, and if they can stay in the lines of the picture.

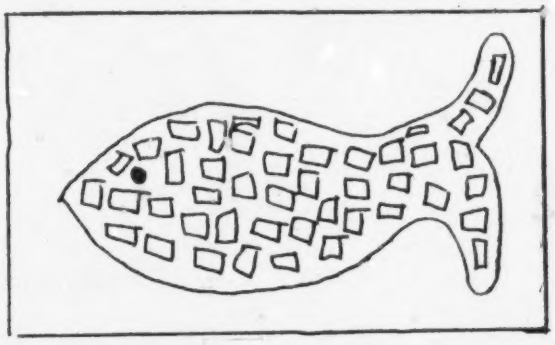
Paper Fish Mosaics

Materials

paste
large sheet of colored construction paper
small squares of multi-colored construction paper

This is an art activity designed to develop fine motor coordination, and can be adapted for use with any age child. The size of the construction paper fish depends upon the age and attention span of the child; a smaller fish would be advised for the young child and for the child with a short attention spen. The size of the paper squares also depends upon the age of the child; young children or those with very poor fine motor coordination would use squares of at least 1 inch x 1 inch.

The child picks up a colored square, applies paste, and pastes it onto the fish. Squares are applied until the entire area is filled.



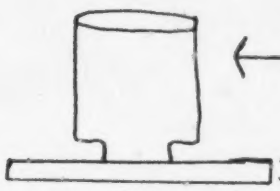
Paperweights

Materials

baby food jars
plaster of paris
water
Cryst-L-Craze paint
3" x 3" piece of varnished walnut or other base
glue

Mix up the plaster of paris with water until it makes a "soupy" consistency. Pour it into the baby food jar. Let it dry. Paint the glass jar. Apply two coats. Let them dry, then glue the 3" x 3" piece of walnut onto the top with resin glue.

The children were very interested in watching the plaster of paris change from a powder to a liquid to a solid form, and watching the paint crystallize on the glass.



baby food jar filled with plaster of paris

3" x 3" base for paper weight

Pencil Holders

Materials

craft sticks
tagboard 5" x 10"
piece of round tagboard to fit the bottom of the pencil holder
glue
stapler

Roll the tagboard and staple the ends together. Apply glue to the craft sticks, one by one. Glue the sticks around the tagboard. When the glue is dry, place the round piece of tagboard on one end, cut to fit, glue, and let dry. The pencil holder can then be painted, or decorated with glitter or other materials.

The children participated well in this activity and followed directions independently, without frustrations.

tagboard is rolled and stapled together

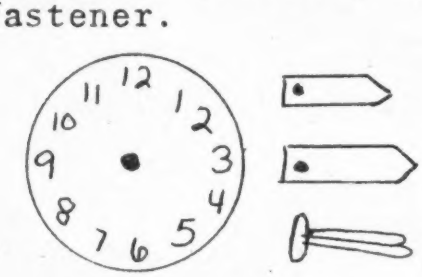
craft sticks are glued on and then painted

Paper Watches

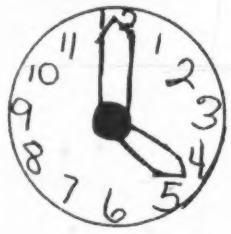
Materials

tagboard
2 round head brass paper fasteners
masking tape
crayons, paints, or felt-tipped pens

The children cut out an approximate 2" circle from the tagboard and write a clock face on it. Hands of the clock are also cut from tagboard, and are painted two different colors. Holes are punched in the hands, and in the face of the watch, and a paper fastener is pushed through the watch and the hands. A watchband is cut out of the tagboard, and a hole is punched through the middle of the strip. The paper fastener with the watch face and hands is pushed through the hole, and fastened on the back of the watchband with masking tape. Then the band is put around the child's wrist, and is fastened in place with another paper fastener.



pieces of watch cut from tagboard

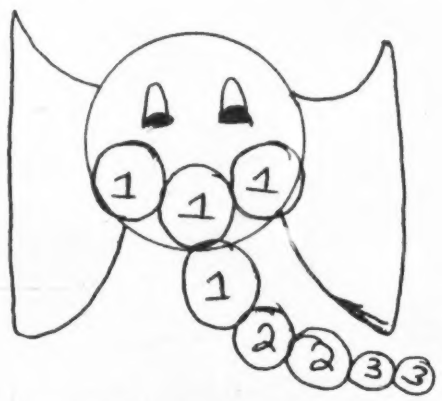


finished watch

"Elephant" Art Activity

Materials

paper plates
tagboard
scissors
stapler
felt-tip pen
gray or pink crayon



This activity is designed primarily to provide practice in handling scissors, developing the necessary motor skills involved in cutting. It also gives the child experience in coloring.

The child should color the entire surface of one side of a paper plate. The teacher or the child then draws eyes with the felt-tip pen. The teacher then draws the outline of two elephant ears on tagboard. The child colors the ears and cuts them out. The ears are stapled to the head. The teacher next draws a series of graduated circles on tagboard. The children color them and cut them out. They are stapled to the head forming cheeks and a trunk.

Shoe Bag With 12 Individual Slots

PURPOSE: To reinforce visual-motor auditory involvement with a programmed academic task, and to learn to follow directions

The teacher clipped the letters 'A', 'B', 'C', and 'D' on the first four bags. The child (with headphones on) listened to the directions given by the teacher on the tape recorder. Example: "Point to the first letter. It is an 'A'", etc. Then the teacher asked the child to repeat the letters. Other directions were given such as: "Look at the letters on the desk. Find all the 'A' letters and put them in the 'A' bag. After this was accompl shed, the teacher told the child to write the letters on a piece of paper as she dictated them.

RESULT: The child seemed to be motivated during the task, possibly due to the fact that three senses were being utilized. Thus, there was no distraction from the activity. The teacher feels this is very useful for hard of hearing multiply handicapped children as well as children with auditory reception problems because lessons can be structured before the class begins, and the child is thus able to work individually during the day. Also, the teacher can test the child's work at the end of the day by playing back the tapes.

There is flexibility in using a device such as this in the fact that 2, 3, or all 12 bags can be used. Other uses could include: matching sentences to pictures, sequence work, math work, key work, and perception work. Or, ditto sheets could be developed and given at the end of each programmed lesson.

APPENDIX C

INVENTORY OF MATERIALS

Teacher's Editions--
- Sequential Perceptual Motor Exercises
- Perceptual Motor Development
- Directional-Spatial-Pattern Board Exercises
- Transofax Math Workshop
- Visual-Motor Coordination

Spirit Duplicating Books--
- Arithmetic Drills
- Beginning Readers
- Language Drills
- Learning to Write

Reference Books
- Pre-primers
- Learning to Read
- Language Drills
- Reading for Deaf Children
- Perception
- Visual-Motor Coordination

Posters
- Health and Safety
- Good Manners
- Seasons and Holidays

Giant Letters--Hayes
Seatwork for Beginners--Hayes
Reading Ungraded Primary Series--Hayes
Patterns in Math
Frostig Visual Perception Program

Giant Thermometer
Globe
Ball Toss Game
Dial 'N Spell
Lock Board
Spiralograph
Bingo
Road Sign Game
Jointed Wooden Dolls
Barn and Farm Animals
Dominoes
Peg Boards
Teachatime Clocks
Sewing Cards
Doll House
Lacing, Snapping, Threading, Tying Exercises
Parquetry Blocks--Playskool
Abacus
Bean Bags
Nuts and Bolts Boards
Doorway Gym Bar

Paddle Mirrors
Alphabet Lacing Boards
Tinker Toy Design Blocks
Rubber Feet

Flannel Boards
Flannel Board Forms--People, discs, squares, apples, seasons, school, farm animals
Magnetic Forms--Discs, numbers, squares, triangles, stars, apples, horses, fish, cows, men, women, pears, birds
Flash Cards--ABC, addition, subtraction, picture-word, body parts
Cubical counting blocks
Learning squares, triangles, circles
Design blocks
Pattern Learning forms
Graded squares and triangles
Giant Foam Blocks
Flip Chart
Puzzles--perception, parts of body, animals, jobs, children
Vocabulary Cards--dishes, utensils, household items, furniture, classroom items, food, days of the week, parts of the body, clothing, alphabet, primary rooms, numbers, nouns, verbs
Shoe Bags--Show and Tell, Pocket Chart, Button Pockets, Button Flowers

CONSULTING PSYCHOLOGIST'S REPORT

Prior experience in two experimental summer programs at the Indiana School for the Deaf resulted in specific observations and recommendations which were to be implemented in this third experimental summer program in 1971. Observations by the three consultants retained during the experimental summer program covered a wide territory in 1970 and need not be reviewed here in any detail. In general, however, the composition of the selected students and the problems they presented remained roughly the same as in the preceding years. Shifts in instructional and administrative personnel have not appreciably altered the kind of instructional strategies previously employed. In most major respects, then, the situation confronting the current consultant was quite comparable to that facing prior consultants so that a report of efforts to implement some of their recommendations will be of value. Several of the previous consultants suggested pre- and post-testing; first, to make some assessments of selected children, and second, to compare subsequent test results with those gathered earlier in order to make appraisals of the rate of progress of students. While most consulting time went to this end, other objectives were also attended to. The consultant provided guidance and assistance to the instructional and administrative staff, upon their request, and gathered as much information as possible about the overall program so that a final evaluative report would be written and so that clear recommendations about the role of consultants

in future programs could be made.

Only one-half of the total number of students enrolled in the summer session were evaluated for the purposes of this program; the remaining half, earlier earmarked as likely candidates for enrollment in the regular program at the Indiana School for the Deaf, were evaluated by the institutional psychologist who could best provide the information required to meet specific admittance purposes. Those children selected for testing for this program were evaluated during the second week, and re-evaluated during the sixth week of the six-week session. While intellectual evaluations were included in the battery of tests administered in the first testing, intellectual re-evaluations were given during the second testing only if the first evaluation was likely to have produced misleading results. In the event of re-evaluation, of course, a different test was used to mitigate practice-effects. In general, similar but not identical tests were used during the re-evaluative period, except in those instances where practice-effects were predicted to be minimal.

Findings from the psychological test results have proven of considerable value for diagnostic pruposes and have provided a basis for concluding that the behavior of the children in the summer experimental program has improved. Diagnostically, a number of problems were revealed early enough in the child's program so that specific remedial efforts could be directed to meet clearly established needs. In several instances, the mere intellectual evaluation disconfirmed earlier conclusions and modified plans made for the children. Testing revealed one case

of suspected autism which has been referred elsewhere. Thus, the initial testing of the children, early in their academic program, serves a useful purpose. As a basis for evaluating the effectiveness of the teaching program and as a basis for evaluating the progress of any one child or of the children as a group, this testing leaves much to be desired. While the tests employed are clearly standardized tests of considerable merit of diagnostic purposes, they are more frequently than not insensitive to many of the skills which the children have clearly acquired. Comparison of even gross observations from the second week to the sixth week suggests marked changes in some cases which are not reflected in improved test behavior; contrarily, improved test behavior is not necessarily relected in improved class behavior, although the frequency of this latter outcome is far less than the former case. One huge area where little improvement in noted either in gross observations of the classroom or in the results from the tests lies in the range of behavior determined by neurological defects. A number of children have demonstrated truly profound difficulties which do not yield easily to a short program and which, when improved, do not produce much change in test results. Tests of the kind used during this summer are better diagnostic tools than they are measures of refined changes in academic and neurological status. Thus, while the intention of the recommendation from the summer of 1970 is excellent, the means by which this recommendation is implemented will have to undergo considerable revision in order

to meet the full purpose which implies the suggestion.

Even for full diagnostic purposes there are problems. While the summer program has been skillfully organized, testing for diagnostic purposes should occur earlier. For example, it would be far wiser to set the first week of school aside for diagnostic testing and for adequate work so the teachers would be fully apprised of the results. Setting one week aside for this purpose might well justify adding one week to the total program. Adequate testing takes time; furthermore, relaying the results of tests requires conveying the information in some manner, generally through typed reports. Typing takes more time. By the time all of the testing and report writing have been completed, the short summer session is already underway, teachers have already made their own assessments of the situation, and have less reason to use the reports than would otherwise have been the case had this information been available for them earlier.

Proper use and interpretation of test results constitutes a problem of the first magnitude. Most teachers, even those with considerable skill and experience, have had little experience in converting the reports from the psychologist into practical observations of behavior which are likely to be encountered in their classrooms. Despite efforts to make the reports as clear, simple, and realistic as possible, there are real problems of communication. Therefore, if diagnostic tests are to be used in the future, as would be heartily recommended, some time should be allowed for the psychologist to meet with the teachers of each student evaluated in order to convey the full

import of each test record and to assist the teacher in utilizing this information as a tool in anticipating problems and setting up specific programs of action well in advance of the actual convening of the class. Something in the way of a workshop format, for example, might be useful in this regard. Several days of discussion between teachers and the psychologist might well be of considerable profit to both participants. The psychologist could also profit by virtue of the fact that the skills of the teachers are unknown to him and the kinds of techniques to be utilized have not yet been sampled. Diagnostic testing could even be made, in the future, a prerequisite for admittance to the summer program and be done at some time during the spring; early in the summer, then, the consulting psychologist could meet with the instructional staff for several days to assist in the development of programs suitable for each child.

Increased contact with the parents might well be in order, since so many seem unaccepting of their child's handicap. A few are so firmly resistive to the idea that their children are able to learn far more slowly than normal children that problems may well occur in the home related to parental over-expectations or parental over-protection. Some of these difficulties can be reduced if some program could be worked out where the parents for the summer session would be dealt with in much the same manner as those whose children are entering the regular fall program. Some effort to convey expectations and to support them, as well as direct some in their own efforts to help their children, might pay considerable dividends.

While the rating scales, devised in the experimental program

of 1970, were a good idea, they are entirely too gross to show in the way of improvement much in the areas where measures of improvement are most desired. More specific kinds of check-lists would be more suitable. Classroom social behavior, as well as the kinds of pre-learning skills each child possesses, might well be assessed through such devices. Similarly, behavior at meal times, dormitory behavior, and the like would be amenable to such treatment. The significant lack in the current rating system stems from the paucity of detailed observations which are required to make any kind of refined analysis. Work on this kind of system should be carried on during the fall and spring so that it would be in final form for the forthcoming summer of 1972.

Putting the assessment of the children on some other basis than confining the consultant to diagnostic uses which would include conveying information, etc., might be better in the long run. Some accumulation of data in a more research-oriented format would not preclude the use of information for diagnostic purposes. Taking a more research-oriented approach would make it possible to accumulate information about the multiply handicapped child in systematic ways so that better and better predictions and evaluations would be possible. Settling on some kinds of measures to be used for diagnostic purposes and accumulating measures on classroom behavior, however, would require considerable thought and time and preparatory effort. Beginning now would not be too soon to develop some program along this line for the following summer.